

Claims

1. A prefabricating rack frame comprised of a column made of a steel square tube, a cross member made of a bent steel plate, by which a square is formed, and multiple shelf plates are placed, the prefabricating rack frame comprising;
 - 5 the column having plural slots along a longitudinal direction at an even interval; and
 - the cross member having a pair of hooks to be inserted into respective slot, and a location restrictor formed between the upper and the lower hook and bent 10 rectangular to the hook, and tightly contracted on the outer surface of the column.
- 15 2. The prefabricating rack frame as set forth in claim 1, wherein the slot is comprised of an upper portion having enough room for the hook to be inserted and having vertical side which is parallel to each other; a lower portion having narrower width than that of the upper portion and which is force-fitted into the hook, and having vertical side which is parallel to each other; and a slant portion formed between the upper portion and the lower portion.
- 20 3. The prefabricating rack frame as set forth in claim 1, wherein the slot has an inverse trapezoid shape in which a distance of the upper area is longer than that of the lower area, and has respective parallel portion that is measured from the bottom of each slot, and the hook is force-fitted into the parallel portion.
- 25 4. The prefabricating rack frame as set forth in any one of claims 1 to 3, wherein the column has a pair of round openings formed at each right and left of the slot in a parallel way, the location restrictor has a hole at the center thereof and the hole overlaps any of the round openings, in which a screw is inserted to any round opening through the hole.
- 30 5. The prefabricating rack frame as set forth in any one of claims 1 to 3,

wherein a pair of round openings is formed near the slot of the column, the column further has a fixing pin that is comprised of a pin member inserted into any one of the round openings, and a head formed at an end of the pin member that is contacted at the location restrictor of the cross member.

5

6. The prefabricating rack frame as set forth in claim 4, wherein a thread portion is formed around the circumstance of the pin member, and the pin member has a fastigiated point.

10

7. The prefabricating rack frame as set forth in claim 1, wherein an inner vertical end of the hook is inclined outward along a direction from top to bottom, and when each hook fits into each slot, the inner vertical end of the hook contraposes the outer side of the location restrictor against the wall of the column so as to squash.

15

8. The prefabricating rack frame as set forth in claim 1, wherein the cross member further has a pit and a reinforcement rib; the pit is formed at the outer corner where each longitudinal end of the cross member meets the foot of the location restrictor; and a reinforcement rib is provided at the inner corner of the 20 location restrictor and its configuration counterposes to that of the pit.

9. The prefabricating rack frame as set forth in claim 8, wherein the pit and the reinforcement rib are formed perpendicular to the border line of the location restrictor.

25

10. The prefabricating rack frame as set forth in claim 1, wherein the cross member is comprised of a vertical web having the hook and the location restrictor at each longitudinal of the vertical web, and an upper/lower horizontal flange formed at the upper/lower vertical end of the vertical web and bent perpendicular to the 30 vertical web and opposite to the extending direction of the location restrictor.

11. The prefabricating rack frame as set forth in claim 1, wherein the cross member is comprised of a vertical web having the hook and the location restrictor at each longitudinal of the vertical web; an upper horizontal flange formed at the upper 5 vertical end of the vertical web and bent perpendicular to the vertical web and opposite to the extending direction of the location restrictor; and a lower horizontal flange formed at the lower vertical end of the vertical web and bent perpendicular to the vertical web and at the same direction of the location restrictor.

10 12. The prefabricating rack frame as set forth in claim 10 or 11, wherein a square pipe is used as the column, and the cross section of the location restrictor and the upper/lower horizontal flange has a rectangular shape that is fully contacted to the one surface of the square pipe column.

15 13. The prefabricating rack frame as set forth in claim 10 or 11, wherein a round pipe is used as the column, and the cross section of the location restrictor and the upper/lower horizontal flange has an arc that is fully contacted to the one surface of the round pipe column.